

**REMARKS**

Claims 1-20, all the claims presently pending in the application, stand rejected on prior art grounds. Claims 1-14 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Claims 7-12 and 14 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite.

Regarding the prior art rejections, claims 1-20 stand rejected under 35 U.S.C. §102(e) as anticipated by Kaplan (U.S. Pat. No. 6,141,339).

These rejections are respectfully traversed in view of the following discussion.

**I. THE CLAIMED INVENTION**

Applicant's invention, as disclosed and defined in claim 1, is directed to an asymmetrical digital subscriber line (ADSL) system. The invention includes an apparatus on the station side in which a signal received from the apparatus on the subscriber side through the subscriber line is demodulated by a second ADSL modem. Thereafter, the digital audio signal is converted into an analog audio signal, which is supplied to an analog telephone network, and at the same time high-speed digital data is supplied to a high-speed digital data network, while an analog audio signal of the analog telephone network is converted into a digital audio signal. The station side apparatus includes a line concentrator to concentrate the digital audio signal together with high-speed digital data of the high-speed digital data network by time division, and supplied to the subscriber line after being modulated by the second ADSL modem.

An important feature of the invention is that the apparatus on the subscriber side and apparatus on the station side convert each digital audio signal as well as each high-speed digital data into asynchronous transfer mode (ATM) cells in each respective line concentrator using time division.

As a result, the present invention provides a more efficient system for transferring an analog audio signal and a high-speed digital data signal together through the same ADSL subscriber line without using a plain old telephone system (POTS) splitter on the subscriber side and station side.

09/450,768  
MA-385-US

## II. THE REJECTION UNDER 35 USC §112, FIRST PARAGRAPH

The Examiner alleges that the present invention, as defined by claims 1-14 fail to comply with the written description requirement. More specifically, the Examiner considers that the description beginning at line 24 of page 14 and continuing through line 16 of page 15 discloses that the digital data 39,49 are already ATM cells and that, therefore, the line concentrator in the station side apparatus does not convert the digital data into ATM cells.

In response, Applicant first points out that the original claims contained this wording. Therefore, by definition, Applicant clearly had possession of the claimed invention as of the time of filing the Application.

Second, Applicant brings to the Examiner's attention to the discussion at lines 20-26 of page 11: "*The line concentrator 22 sends the ATM cells from the analog telephone 10 or the digital data extracted from the ATM cells to an analog telephone network 25 ....*"

Moreover, beginning at line 27 of page 11: "*On the contrary, the line concentrator 22 within the apparatus 20 on the station side attaches the respective separate destination address (VPI/VCI) to the high-speed digital data ..., and the audio data received from the analog telephone network 25 and converted into digital or the ATM cells accommodating the same digital audio data, ....*"

Applicant submits that one of ordinary skill in the art would readily understand that these two paragraphs above describe a system in which the specific interface between the station side apparatus 20 and the analog telephone network 25 and between the station side apparatus 20 and the high-speed digital data network 26 depends upon whether the analog telephone network 25 and the high-speed digital data network 26 is adapted to receive ATM cells or whether the interface shown in subscriber side apparatus 12 is to be used, such as the AD/DA converter 13 and ATM cell converter 16 for interfacing with the analog telephone network 25 (e.g., similar to the interface with the analog telephone 10) and the ATM cell converter 17 for interfacing with the high-speed digital data network 26 (e.g., similar to the interface with the high-speed digital data apparatus 11).

Obviously, the embodiment shown in Figure 1 shows an interface on the station side apparatus in which ATM cells are forwarded to, and received from, both the analog telephone network 25 and the high-speed digital data network 26. Applicant submits that, based on the

09/450,768  
MA-385-US

above-recited description, this exemplary embodiment could easily be shown as a second embodiment that includes the interface shown in the subscriber side apparatus in which ATM cell converters 16, 17 and AD/DA converter 13 are used for the interface with the analog telephone network 25 and the high-speed digital data network 26.

Accordingly, given the above paragraphs from page 11 and the explanation above that the interface on the station side apparatus may or may not include conversion, as dependent upon the specific interface requirements, Applicant requests that the Examiner reconsider and withdraw this rejection. That is, Applicant submits that the above-cited paragraphs from page 11 make it clear to one of ordinary skill in the art that the station apparatus does indeed include the option of being able to make the conversions.

### **III. THE REJECTION UNDER 35 USC §112, SECOND PARAGRAPH**

The Examiner considers that the terminology “the same” renders claim 7 indefinite. Although Applicant does not agree with the Examiner, since the normal rule of English grammar provides that the intended object is the nearest noun. However, in an effort to expedite prosecution, Applicant has amended claim 7 to address the Examiner’s concern.

Therefore, Applicant requests that the Examiner reconsider and withdraw this rejection.

### **IV. THE PRIOR ART REJECTION**

The Examiner alleges that Kaplan anticipates the present invention as exemplarily defined by the claims 1-20. However, Applicant submits that the Examiner is confined to the plain meaning of the claim language, as this language would be interpreted by one of ordinary skill in the art.

Accordingly, it is brought to the Examiner’s attention that the present invention is defined using a subscriber side apparatus 12 and a station side apparatus 20.

Accordingly, it is submitted that one of ordinary skill in the art would consider that the most likely apparatus in Kaplan for the station side apparatus would be the service node 140, since this is the most likely apparatus where an interface occurs with the “analog telephone

09/450,768  
MA-385-US

network" (e.g., POTS 160) and the "high-speed digital data network" (e.g. ATM 150).

To one of ordinary skill in the art, it is clear from Figures 1 and 4 of Kaplan that service node 140 does not satisfy the plain meaning of the independent claim, in at least that there is clearly no "second ADSL modem" in the service node 140, since this node interfaces with the SONET 130, not the ADSL. That is, according to lines 57-58 of column 3, the ADSL interface in Kaplan is in the MUX 220, not the service node 140.

It is also noted that this deficiency cannot be easily overcome by a secondary reference, since such change would change the principle of operation of Kaplan, and such modification to change the principle of operation would be prohibited by MPEP §2143.01.

Hence, turning to the clear language of the claims, in Kaplan there is no teaching or suggestion of: "... an apparatus on the station side in which a signal received from said apparatus on the subscriber side through the subscriber line is demodulated by a second ADSL modem ....", as required by claim 1.

For at least the reasons stated above, Applicant respectfully submits that the cited references fail to teach or suggest every feature of independent claims 1-20. Therefore, the subject matters of claims 1-20 are fully patentable over the cited references.

Based on the foregoing, the Examiner is respectfully requested to reconsider and withdraw the rejection.

## **V. INFORMAL MATTERS AND CONCLUSION**

In view of the foregoing, Applicant submits that claims 1-20, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to withdraw the rejection and pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner may contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

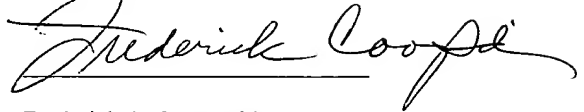
09/450,768  
MA-385-US

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

Date:

4/23/04

A handwritten signature in cursive script, reading "Frederick Cooperrider", written over a horizontal line.

Frederick E. Cooperrider  
Reg. No. 36,769

**McGinn & Gibb, PLLC**  
8321 Old Courthouse Road, Suite 200  
Vienna, VA 22182-3817  
(703) 761-4100  
**Customer No. 21254**